REMARKS/ARGUMENTS

Reexamination of the captioned application is respectfully requested.

A. SUMMARY OF THIS AMENDMENT

By the current amendment, Applicants basically:

1. Editorially amend the specification.
2. Amend claims 1 – 6, 9 – 21, 24 – 25 in non-narrowing editorial ways.
3. Thank the Examiner for the indication of allowable subject matter in claims 4-10, 12-15 and 20-25.
4. Respectfully traverse all prior art rejections.

B. PATENTABILITY OF THE CLAIMS

Claims 1-3, 11, 16-19, 26 and 27 stand rejected under 35 USC 102(b) as being anticipated by U.S. Patent 5,786,727 to Sigmon (Fig. 1). All prior art rejections are respectfully traversed for at least the following reasons.

As is described in relation to Fig. 1 of the present application, a Chireix amplifier is based on the outphasing principle. This means that (with reference to the particular example described) signal component separator 10 converts the amplitude modulated input signal into two phase-modulated signals having opposite sense (phase). These signals are amplified and an amplified amplitude modulated signal is recovered in an output network including two quarter-wave lines and compensating reactances +jX and –jX (note the minus sign). As an alternative the compensating reactances may be eliminated by using a lengthened and shortened (compared to a quarter wavelength) transmission lines. See page 6, lines 17-19, of the specification.

Applicants' independent claims require that a power amplifier stage of a composite amplifier have an even number of power amplifiers arranged into a plurality of

Chireix pairs connected to a common load. This limitation requires that each Chireix pair be based on the outphasing principle (see discussion of "Chireix" above). However, this limitation and requirement is simply not described or suggested by Sigmon, as will be shown below.

The only similarity between Sigmon and Applicants' claimed subject matters is that the both have an even number of power amplifiers. The office action contends that power amplifiers 14 and 15 (Fig. 1 of Sigmon) form a first Chireix pair and that power amplifiers 22 and 23 form a second Chireix pair. However, this contention is not accurate.

As is apparent from column 2, lines 39-45, of Sigmon, power divider 40 divides the input signal into two equal-phase signals forwarded to the first alleged Chireix pair 14, 15 and a third, delayed signal, which is split into two further equal-phase signals forwarded to the second alleged Chireix pair 22, 23 (column 2, line 67 – column 3, line 2 of U.S. Patent 5,786,727 to Sigmon). Since both of Sigmon's alleged Chireix pairs receive equal-phase input signals, there can be no outphasing in Sigmon!

Furthermore, on the output side, Sigmon's amplifier 14, 15 has two equal quarter-wave transmission lines 16 and 18 (column 3, lines 38-40 and 46-48). As noted above, if a Chireix amplifier is implemented by using transmission lines on the output side, they should have unequal length. The output side of Sigmon's amplifier 22, 23 does not even have any phase shifters.

In summary, the power amplifier pairs 14, 15 and 22, 23 of U.S. Patent 5,786,727 to Sigmon are not Chireix pairs, since they differ from a Chireix amplifier on both the input and out put side. The comment of the office action that "It should be noted that the amplifiers 14, 15, 22 and 23 can be read as the claimed Chireix pairs since the quarter

wavelengths 42, 20 and 44 transmission lines have the delay which corresponds to the phase shift" is utterly incorrect. First, regarding this comment pertaining to Sigmon's amplifiers, there still is no reactive part. Second, the phase shifts are on the input side. Third, why is there another phase shift (16, 24) on one of the "pairs" but not on the other?

The rejected dependent claims 2, 3, 17, 18, 19 also have separate patentable merit. For example, it is noted that element 40 of Sigmon is only a power divider; it does not generate an amplitude dependent phase. Sigmon element 40 produces two signals in-phase with the input signal and one signal that is delayed a quarter wavelength (column 2, lines 40-45). For this and other reasons, Applicants respectfully submit that the rejected dependent claims are indeed patentable.

C. MISCELLANEOUS

In view of the foregoing and other considerations, all claims are deemed in condition for allowance. A formal indication of allowability is earnestly solicited.

The Commissioner is authorized to charge the undersigned's deposit account #14-1140 in whatever amount is necessary for entry of these papers and the continued pendency of the captioned application.

Should the Examiner feel that an interview with the undersigned would facilitate allowance of this application, the Examiner is encouraged to contact the undersigned.

Respectfully submitted,

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